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CH2MHILL

January 15, 2008
264204.PC.80/MIPC.B224F

Ms. Paula Bisson
U.S. Environmental Protection Agency
75 Hawthorne Street, CMD-4-2
San Francisco, CA 94105

Subject: Site Characterization and Cleanup Action Summary Report for Polychlorinated Biphenyl Site Building 386 AL#01, Investigation Area C2, Lennar Mare Island, Vallejo, California

Dear Ms. Bisson:

Enclosed is one copy of the *Site Characterization and Cleanup Action Summary Report for Polychlorinated Biphenyl Site Building 527 AL#01*, for Mare Island, Vallejo, California.

CH2M HILL prepared this report in compliance with the Consent Agreement and Final Order (CA/FO) between the United States Environmental Protection Agency and the United States Department of the Navy, with the City of Vallejo and Lennar Mare Island, LLC as intervenors (USEPA et al. 2001). The CA/FO sets forth the polychlorinated biphenyl requirements that must be met to satisfy the Toxic Substances Control Act for the Eastern Early Transfer Parcel of Mare Island. This report is submitted in compliance with Paragraph 12 of the CA/FO.

Please submit your comments to me at the above address or via e-mail at stephen.farley@ch2m.com by February 15, 2008. If you have any questions regarding this document, please contact me at 707/562-1015 extension 103 or Michael Sanchez at 530/229-3310.

Sincerely,

CH2M HILL

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Stephen M. Farley, P.G.
Quality Control Manager

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Draft

Site Characterization and Cleanup Action Summary Report for Polychlorinated Biphenyl Site Building 386 AL#01, Investigation Area C2, Lennar Mare Island, Vallejo, California

Prepared for

United States Environmental Protection Agency

January 2008

CH2MHILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

Contents

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Figures

Acronyms and Abbreviations

µg/100 cm^2	micrograms per 100 square centimeters
bgs	below ground surface
CA/FO	Consent Agreement and Final Order
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
EETP	Eastern Early Transfer Parcel
IA	Investigation Area
LMI	Lennar Mare Island, LLC
mg/kg	milligrams per kilogram
Navy	United States Department of the Navy
NFA	no further action
PCB	polychlorinated biphenyl
SSPORTS	Supervisor of Shipbuilding, Conversion and Repair, Portsmouth, Virginia, Environmental Detachment
TSCA	Toxic Substances Control Act
TtEMI	Tetra Tech Environmental Management, Inc.
TWD	Technical Work Document
USEPA	United States Environmental Protection Agency

1.0 Introduction

This report summarizes the polychlorinated biphenyl (PCB) cleanup actions performed by CH2M HILL at PCB Site Building 386 AL#01, in Investigation Area (IA) C2 of Lennar Mare Island, LLC's (LMI's), Eastern Early Transfer Parcel (EETP). CH2M HILL prepared this summary report in compliance with the Consent Agreement and Final Order (CA/FO) between United States Environmental Protection Agency (USEPA) and the United States Department of the Navy (Navy), with the City of Vallejo and LMI, as intervenors (CA/FO) (USEPA et al. 2001). The CA/FO sets forth the PCB-related requirements that must be met to satisfy the Toxic Substances Control Act (TSCA) for the EETP of Mare Island. Pursuant to Paragraph 6(a) of the CA/FO, this report demonstrates that no further action (NFA) is necessary, under TSCA, at PCB Site Building 386 AL#01.

The CH2M HILL cleanup actions at PCB Site Building 386 AL#01 consisted of removing concrete, asphalt, or underlying soil from 17 removal areas. These cleanup actions were conducted in accordance with Paragraph 12 of CA/FO and the TSCA regulations in Title 40, Code of Federal Regulations, Part 761.61(a). These cleanup actions were implemented in accordance with the USEPA-approved "*Notification Regarding Self-implementing On-site Cleanup and Disposal of Polychlorinated Biphenyl Remediation Waste at PCB Site Building 386 AL#01 in Investigation Area C2, Eastern Early Transfer Parcel, Lennar Mare Island, Vallejo, California*" (CH2M HILL 2006; USEPA 2006) and corresponding "*Addendum to the Notification Regarding Self-Implementing On-site Cleanup and Disposal of Polychlorinated Biphenyl Remediation Waste at PCB Site Building 386 AL#01 in Investigation Area C2, Eastern Early Transfer Parcel, Lennar Mare Island, California*" (CH2M HILL 2007; USEPA 2007). The remaining detectable total PCB concentrations at PCB Site Building 386 AL#01 meet the TSCA closure criteria for high-occupancy areas.

This document is organized into the following sections:

- **Section 1.0 - Introduction**. Provides an introduction to this report.
- **Section 2.0 - Site Identification and Background**. Provides site background and a description of previous sampling efforts.
- **Section 3.0 -Cleanup Action Summary**. Provides a description of CH2M HILL's cleanup actions at PCB Site Building 386 AL#01.
- **Section 4.0 - Polychlorinated Biphenyl Site Closure Process**. Provides the rationale for site closure.
- **Section 5.0 - Conclusions**. Provides conclusions for this report.
- **Section 6.0 - References**. Provides references for documents used to prepare this report.

2.0 Site Identification and Background

Building 386 is located in IA C2, south of Bagley (formerly 14th) Street between Azuar Drive and Railroad Avenue (Figure 2-1; figures are located at the end of their respective sections). Building 386 was constructed in the early to mid-1920s as part of a single superstructure (with Buildings 388, 390, and 382). Building 386 was used as a metalworking facility, and much of the former metalworking equipment remains in place. Building 386 once contained oil-filled circuit breakers or oil-filled fuse cutouts that were removed by the Navy prior to CH2M HILL cleanup actions. Although adjacent Buildings 382, 388, and 390 have been leased to XKT, Building 386 is not currently leased and is in an area designated for future industrial use, according to the *Preliminary Land Use Plan* (SWA Group 2000).

One PCB site is associated with Building 386 and is listed in Consent Agreement for LMI's EETP (LMI et al. 2001): AL#01. Documentation of the Navy PCB site assessment and confirmation sampling is contained in the *Final Basewide Polychlorinated Biphenyl Confirmation Sampling Report* (Tetra Tech Environmental Management, Inc. [TtEMI] 1998), in the section for Parcel 05-A. PCB Site Building 386 AL#01, the entire ground floor of Building 386, is addressed in this report.

Table 2-1 summarizes the previous sampling that has been performed at PCB Site Building 386 AL#01, including the sample numbers, matrices, dates, and total PCB concentrations (or laboratory reporting limits if PCBs were not detected). Figure 2-2 shows the previous sampling locations and total PCB concentrations at PCB Site Building 386 AL#01.

During an interim assessment in August 1996, personnel from Supervisor of Shipbuilding, Conversion and Repair, Portsmouth, Virginia, Environmental Detachment (SSPORTS), collected 34 wipe samples (6225-0028 through 6225-0035, 6225-0037 through 6225-0042, 6225-005 through 6225-0057, 6218-0244 through 6218-0252, and 6218-0262 through 6218-0269) and 55 solid samples (6225-0010 through 6225-0027, 6225-0046, 6225-0047, 6225-0064 through 6225-0073, 6225-0244 through 6225-0259, and 6218-0253 through 6218-0261) from stain-specific locations on the floor of Building 386 (SSPORTS 1996a) (Figure 2-2). Total PCBs were detected above their respective laboratory reporting limits at 5 of the 34 wipe sample locations, with results ranging from 6.6 (6225-0056) to 507 micrograms per 100 square centimeters (µg/100 cm^2) (6218-0266). Total PCBs were detected above laboratory reporting limits at 17 of the 55 solid sample locations, with results ranging from 1.4 (6225-0066) to 11.2 milligrams per kilogram (mg/kg) (6225-0255).

On November 5, 1996, SSPORTS issued Technical Work Document (TWD) 96-1370 to remediate four floor areas where PCBs were detected above 10 µg/100 cm^2 (SSPORTS 1996b). A 4- by 4-foot area of concrete floor around sample location 6218-0245 (15 µg/100 cm^2) in the northwest corner of Building 386 and three adjacent steel-plate floor areas in the north-central portion of Building 386 around sample locations 6218-0264 (63 µg/100 cm^2), 6218-0265 (20 µg/100 cm^2), and 6218-0266 (507 µg/100 cm^2), respectively, were washed. Following this cleanup action, SSPORTS personnel collected four wipe samples (6296-0091 through 6296-0094) on November 22, 1996, to confirm remaining condi-

tions following abatement activities. Total PCBs were not detected above the laboratory reporting limit (5 µg/100 cm^2) in these samples (Table 2-1) (SSPORTS 1996b).

On July 10, 1997, TtEMI personnel collected two concrete samples (PC1732 and PC1734) and four asphalt samples (PC1731, PC1736, PC1737, and PC1740) from oil-stained areas at PCB Site Building 386 AL#01 (Figure 2-2). The only detected total PCB concentration that exceeded the cleanup goal of 1 mg/kg was in concrete sample PC1734 (3.0 mg/kg) (Table 2-1).

In September 1997, as part of the Navy's Installation Restoration Program site investigation, the Navy advanced three Geoprobe® borings and collected six soil samples and analyzed the samples for PCBs (Figure 2-2). These six samples included B386B001 at 0 to 0.5 feet below ground surface (bgs) and 3.5 to 4 feet bgs, B386B002 at 3.5 to 4 feet bgs and 11 to 11.5 feet bgs, and B386B003 at 0 to 0.5 feet bgs and 4.0 to 4.5 feet bgs. Total PCB concentrations were not calculated; however, no Aroclors were detected above the respective laboratory reporting limits in these soil samples (Table 2-1).

TABLE 2-1
Sample Results for PCB Site Building 386 AL#01 prior to the CH2M HILL Cleanup Action
Site Characterization and Cleanup Action Summary Report for Polychlorinated Biphenyl Site Building 386 AL#01, Investigation Area C2, Lennar Mare Island, Vallejo, California

Sample Number	Sample Matrix	Sample Date	Total PCB Concentration	Unit	Comments
6218-0253	Solid	08/14/96	<1.0	mg/kg	
6218-0254	Solid	08/14/96	1.8	mg/kg	Aroclor-1254
6218-0255	Solid	08/14/96	<1.0	mg/kg	
6218-0256	Solid	08/14/96	<1.0	mg/kg	
6218-0257	Solid	08/14/96	<1.0	mg/kg	
6218-0258	Solid	08/14/96	<1.0	mg/kg	
6218-0259	Solid	08/14/96	<1.0	mg/kg	
6218-0260	Solid	08/14/96	2.1	mg/kg	Aroclor-1248
6218-0261	Solid	08/14/96	6.6	mg/kg	Aroclor-1248
6225-0046	Solid	08/14/96	<5.0	mg/kg	
6225-0047	Solid	08/14/96	<1.0	mg/kg	
6225-0064	Solid	08/15/96	1.6	mg/kg	Aroclor-1254
6225-0065	Solid	08/15/96	3.4	mg/kg	Aroclor-1248
6225-0066	Solid	08/15/96	1.4	mg/kg	Aroclor-1248
6225-0067	Solid	08/15/96	2.6	mg/kg	Aroclor-1254
6225-0068	Solid	08/15/96	<1.0	mg/kg	
6225-0069	Solid	08/15/96	<1.0	mg/kg	
6225-0070	Solid	08/15/96	4.5	mg/kg	Aroclor-1248
6225-0071	Solid	08/15/96	3.2	mg/kg	Aroclor-1248
6225-0072	Solid	08/15/96	<1.0	mg/kg	
6225-0073	Solid	08/15/96	<1.0	mg/kg	
6225-0019	Solid	08/16/96	2.0	mg/kg	Aroclor-1254
6225-0020	Solid	08/16/96	<1.0	mg/kg	
6225-0021	Solid	08/16/96	<1.0	mg/kg	
6225-0022	Solid	08/16/96	<1.0	mg/kg	
6225-0023	Solid	08/16/96	<1.0	mg/kg	
6225-0024	Solid	08/16/96	1.6	mg/kg	Aroclor-1248
6225-0025	Solid	08/16/96	<1.0	mg/kg	
6225-0026	Solid	08/16/96	<1.0	mg/kg	
6225-0027	Solid	08/16/96	<1.0	mg/kg	
6225-0010	Solid	08/19/96	<1.0	mg/kg	
6225-0011	Solid	08/19/96	<1.0	mg/kg	
6225-0012	Solid	08/19/96	<1.0	mg/kg	
6225-0013	Solid	08/19/96	5.0	mg/kg	Aroclor-1254
6225-0014	Solid	08/19/96	<5.0	mg/kg	

TABLE 2-1
Sample Results for PCB Site Building 386 AL#01 prior to the CH2M HILL Cleanup Action
Site Characterization and Cleanup Action Summary Report for Polychlorinated Biphenyl Site Building 386 AL#01, Investigation Area C2, Lennar Mare Island, Vallejo, California

Sample Number	Sample Matrix	Sample Date	Total PCB Concentration	Unit	Comments
6225-0015	Solid	08/19/96	<5.0	mg/kg	
6225-0016	Solid	08/19/96	<5.0	mg/kg	
6225-0017	Solid	08/19/96	10.1	mg/kg	Aroclor-1254
6225-0018	Solid	08/19/96	<5.0	mg/kg	
6225-0244	Solid	08/19/96	<5.0	mg/kg	
6225-0245	Solid	08/19/96	<5.0	mg/kg	
6225-0246	Solid	08/19/96	<5.0	mg/kg	
6225-0247	Solid	08/19/96	6.9	mg/kg	Aroclor-1254
6225-0248	Solid	08/19/96	<5.0	mg/kg	
6225-0249	Solid	08/19/96	<5.0	mg/kg	
6225-0250	Solid	08/19/96	<1.0	mg/kg	
6225-0251	Solid	08/19/96	1.5	mg/kg	Aroclor-1254
6225-0252	Solid	08/19/96	<5.0	mg/kg	
6225-0253	Solid	08/19/96	<5.0	mg/kg	
6225-0254	Solid	08/19/96	<5.0	mg/kg	
6225-0255	Solid	08/19/96	11.2	mg/kg	Aroclor-1260
6225-0256	Solid	08/19/96	3.4	mg/kg	Aroclor-1260
6225-0257	Solid	08/19/96	<1.0	mg/kg	
6225-0258	Solid	08/19/96	<5.0	mg/kg	
6225-0259	Solid	08/19/96	<5.0	mg/kg	
6225-0055	Wipe	08/21/96	<5.0	µg/100 cm^2	
6225-0056	Wipe	08/21/96	6.6	µg/100 cm^2	Aroclor-1260
6225-0057	Wipe	08/21/96	<5.0	µg/100 cm^2	
6218-0244	Wipe	08/23/96	<5.0	µg/100 cm^2	
6218-0245	Wipe of Concrete Floor	08/23/96	15.0	µg/100 cm^2	Aroclor-1260; removed under TWD 96-1370
6218-0246	Wipe	08/23/96	<5.0	µg/100 cm^2	
6218-0247	Wipe	08/23/96	<5.0	µg/100 cm^2	
6218-0248	Wipe	08/23/96	<5.0	µg/100 cm^2	
6218-0249	Wipe	08/23/96	<5.0	µg/100 cm^2	
6218-0250	Wipe	08/23/96	<5.0	µg/100 cm^2	
6218-0251	Wipe	08/23/96	<5.0	µg/100 cm^2	
6218-0252	Wipe	08/23/96	<5.0	µg/100 cm^2	
6218-0262	Wipe	08/23/96	<5.0	µg/100 cm^2	
6218-0263	Wipe	08/23/96	<5.0	µg/100 cm^2	

TABLE 2-1
Sample Results for PCB Site Building 386 AL#01 prior to the CH2M HILL Cleanup Action
Site Characterization and Cleanup Action Summary Report for Polychlorinated Biphenyl Site Building 386 AL#01, Investigation Area C2, Lennar Mare Island, Vallejo, California

Sample Number	Sample Matrix	Sample Date	Total PCB Concentration	Unit	Comments
6218-0264	Wipe of Steel Plate on Floor	08/23/96	63.0	µg/100 cm^2	Aroclor-1242; removed under TWD 96-1370
6218-0265	Wipe of Steel Plate on Floor	08/23/96	20.0	µg/100 cm^2	Aroclor-1254; removed under TWD 96-1370
6218-0266	Wipe of Steel Plate on Floor	08/23/96	507.0	µg/100 cm^2	Aroclor-1254; removed under TWD 96-1370
6218-0267	Wipe	08/23/96	<5.0	µg/100 cm^2	
6218-0268	Wipe	08/23/96	<5.0	µg/100 cm^2	
6218-0269	Wipe	08/23/96	<5.0	µg/100 cm^2	
6225-0028	Wipe	08/27/96	<5.0	µg/100 cm^2	
6225-0029	Wipe	08/27/96	<5.0	µg/100 cm^2	
6225-0030	Wipe	08/27/96	<5.0	µg/100 cm^2	
6225-0031	Wipe	08/27/96	<5.0	µg/100 cm^2	
6225-0032	Wipe	08/27/96	<5.0	µg/100 cm^2	
6225-0033	Wipe	08/27/96	<5.0	µg/100 cm^2	
6225-0034	Wipe	08/27/96	<5.0	µg/100 cm^2	
6225-0035	Wipe	08/27/96	<5.0	µg/100 cm^2	
6225-0037	Wipe	08/27/96	<5.0	µg/100 cm^2	
6225-0038	Wipe	08/27/96	<5.0	µg/100 cm^2	
6225-0039	Wipe	08/27/96	<5.0	µg/100 cm^2	
6225-0040	Wipe	08/27/96	<5.0	µg/100 cm^2	
6225-0041	Wipe	08/27/96	<5.0	µg/100 cm^2	
6225-0042	Wipe	08/27/96	<5.0	µg/100 cm^2	
6296-0091	Wipe	11/22/96	<5.0	µg/100 cm^2	TWD verification sample
6296-0092	Wipe	11/22/96	<5.0	µg/100 cm^2	TWD verification sample
6296-0093	Wipe	11/22/96	<5.0	µg/100 cm^2	TWD verification sample
6296-0094	Wipe	11/22/96	<5.0	µg/100 cm^2	TWD verification sample
PC1731	Asphalt	07/10/97	0.2J	mg/kg	0.16 J mg/kg Aroclor-1254; 0.034 J mg/kg Aroclor-1260
PC1732	Concrete	07/10/97	0.2J	mg/kg	0.18 J mg/kg Aroclor-1254; 0.04 J mg/kg Aroclor-1260
PC1734	Concrete	07/10/97	3	mg/kg	Aroclor-1254
PC1736	Asphalt	07/10/97	<0.067	mg/kg	
PC1737	Asphalt	07/10/97	0.09J	mg/kg	Aroclor-1254
PC1740	Asphalt	07/10/97	0.2	mg/kg	Aroclor-1260

TABLE 2-1

Sample Results for PCB Site Building 386 AL#01 prior to the CH2M HILL Cleanup Action

Site Characterization and Cleanup Action Summary Report for Polychlorinated Biphenyl Site Building 386 AL#01, Investigation Area C2, Lennar Mare Island, Vallejo, California

Sample Number	Sample Matrix	Sample Date	Total PCB Concentration	Unit	Comments
B386GB001	Soil	09/23/97	<0.034	mg/kg	0 to 0.5 feet bgs
B386GB001	Soil	09/23/97	<0.034	mg/kg	3.5 to 4.0 feet bgs
B386GB002	Soil	09/23/97	<0.022	mg/kg	3.5 to 4.0 feet bgs
B386GB002	Soil	09/23/97	<0.086	mg/kg	11 to 11.5 feet bgs
B386GB003	Soil	09/23/97	<0.0067	mg/kg	0 to 0.5 feet bgs
B386GB003	Soil	09/23/97	<0.01	mg/kg	4.0 to 4.5 feet bgs

Notes:

Sample numbers beginning with PC were collected by TtEMI. Sample numbers beginning with B were collected by Navy personnel. Other samples were collected by SSPORTS.

J = estimated concentration

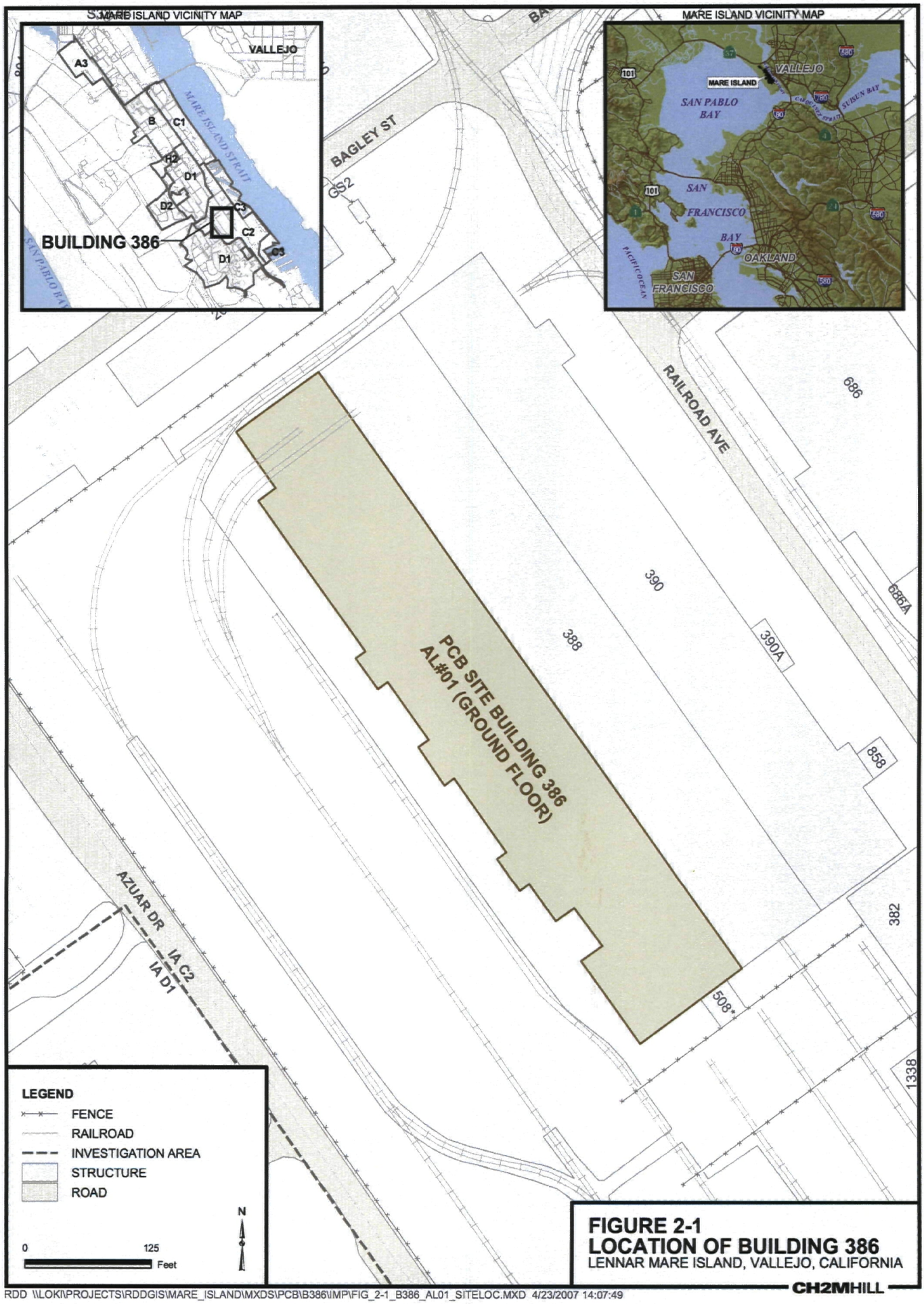
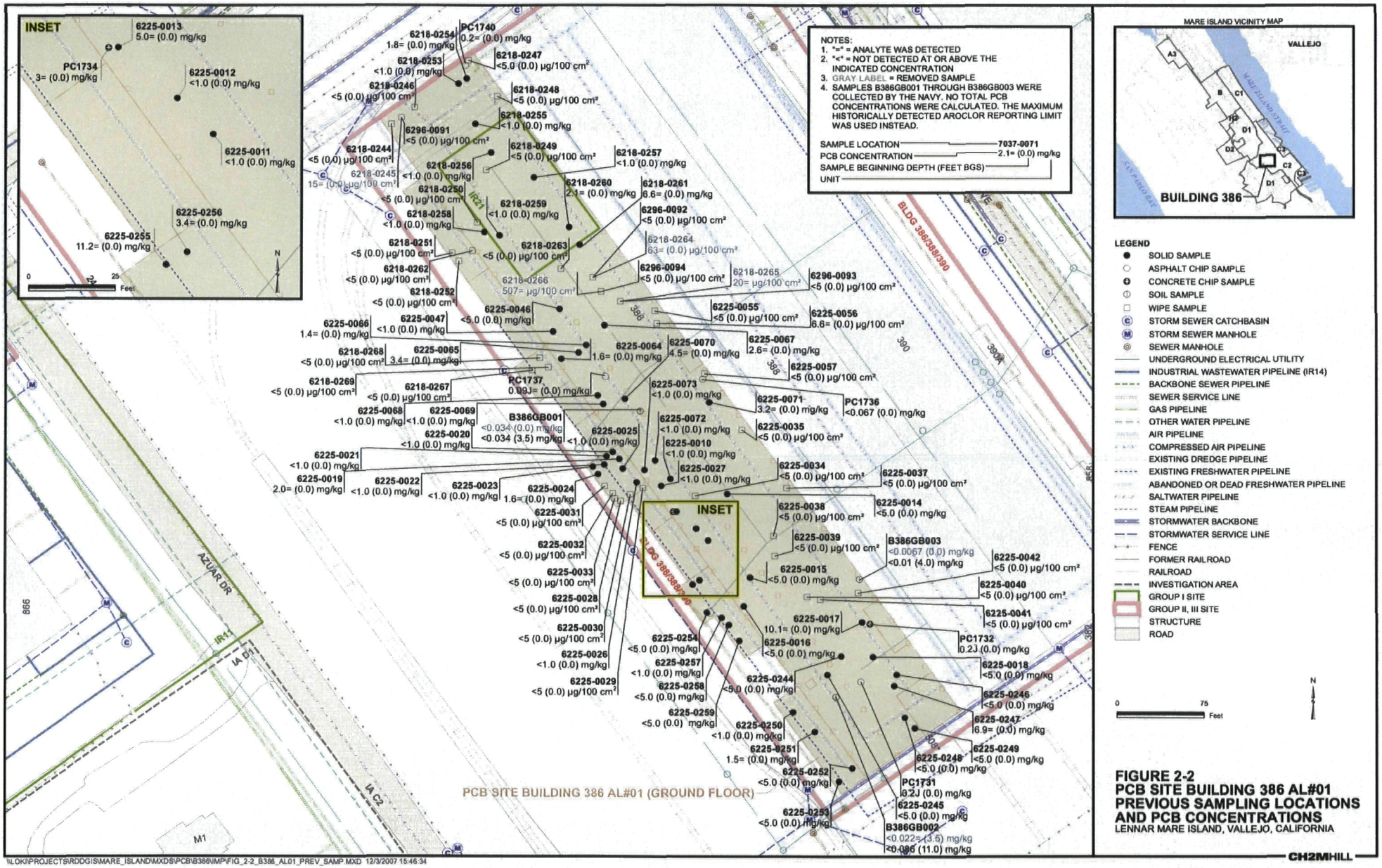


FIGURE 2-1
LOCATION OF BUILDING 386
LENNAR MARE ISLAND, VALLEJO, CALIFORNIA

CH2MHILL

RDD \\LOKI\PROJECTS\RDDGIS\MARE_ISLAND\MXDS\PCB\B386\IMP\FIG_2-1_B386_AL01_SITELOC.MXD 4/23/2007 14:07:49



\\LOK\PROJECTS\RDDGIS\MARE_ISLAND\MXDS\PCB\B386\MP\FIG_2-2_B386_AL01_PREV_SAMP.MXD 12/3/2007 15:46:34

FIGURE 2-2
PCB SITE BUILDING 386 AL#01
PREVIOUS SAMPLING LOCATIONS AND PCB CONCENTRATIONS
LENNAR MARE ISLAND, VALLEJO, CALIFORNIA

CH2MHILL

3.0 Cleanup Action Summary

The 2007 cleanup actions performed by CH2M HILL at PCB Site Building 386 AL#01 were implemented in accordance with the USEPA-approved "*Notification Regarding Self-implementing On-site Cleanup and Disposal of Polychlorinated Biphenyl Remediation Waste at PCB Site Building 386 AL#01 in Investigation Area C2, Eastern Early Transfer Parcel, Lennar Mare Island, Vallejo, California*" (CH2M HILL 2006; USEPA 2006) and "*Addendum to the Notification Regarding Self-Implementing On-site Cleanup and Disposal of Polychlorinated Biphenyl Remediation Waste at PCB Site Building 386 AL#01 in Investigation Area C2, Eastern Early Transfer Parcel, Lennar Mare Island, California*" (CH2M HILL 2007; USEPA 2007). The 2007 cleanup actions consisted of removing concrete, asphalt, and soil, collecting verification samples, and restoring the floor. Analytical results for verification samples collected during the 2007 cleanup actions are summarized in Table 3-1 and are provided in Appendix A.

Cleanup actions were performed at 17 removal areas within the footprint of PCB Site Building 386 AL#01. The locations of these 17 removal areas are presented in Figure 3-1. The following subsections summarize the scope and results of the cleanup actions performed at each removal area.

3.1 Removal Area 1

On March 1, 2007, asphalt was removed from an approximately 5- by 5-foot area around previous sample location 6218-0254 (1.8 mg/kg). Approximately 2 feet of underlying soil were removed, and four discrete soil samples were collected on March 2, 2007 (B386RA01CS0801 through B386RA01CS0804) (Figure 3-1). PCBs were not detected above laboratory reporting limits in any of the soil verification samples (Table 3-1). Restoration of Removal Area 1 was completed on March 8, 2007.

3.2 Removal Area 2

On February 27, 2007, asphalt was removed from an approximately 23- by 30-foot area around previous sample locations 6218-0260 (2.1 mg/kg) and 6218-0261 (6.6 mg/kg). Approximately 3 feet of underlying soil were removed, and six nine-point composite soil samples were collected on March 2,2007, based on a 3-meter grid (B386RA02CS0805 through B386RA02CS0810) (Figure 3-1). PCBs were not detected above laboratory reporting limits in any of the composite verification soil samples (Table 3-1). Removal Area 2 was backfilled with compacted materials on March 13, 2007, and covered with an asphalt layer on March 14, 2007.

3.3 Removal Area 3

On February 20, 2007, an approximately 16- by 16-foot area of floor was removed around previous sample location 6225-0067 (2.6 mg/kg). Approximately 3 feet of underlying soil were removed, and four discrete soil samples were collected on February 21, 2007

(B386RA03CS0811 through B386RA03CS0814) (Figure 3-1). PCBs were detected in samples B386RA03CS0813 and B386RA03CS0814 at total concentrations of 0.13 mg/kg and 0.12 mg/kg, respectively (Table 3-1). These total concentrations are less than the cleanup goal of 1 mg/kg. Removal Area 3 was backfilled with compacted materials on March 12, 2007, and covered with an asphalt layer on March 14, 2007.

3.4 Removal Area 4

On February 27, 2007, an approximately 5 -by 5-foot area of floor and approximately 1.5 feet of underlying soil was removed around previous sample location 6225-0066 (1.4 mg/kg), and four discrete soil samples were collected (B386RA04CS0815 through B386RA04CS0818) (Figure 3-1). PCBs were not detected above laboratory reporting limits in any of the verification soil samples (Table 3-1). Removal Area 4 was backfilled with compacted materials on March 7, 2007, and covered with an asphalt layer on March 14, 2007.

3.5 Removal Area 5

On February 23, 2007, an approximately 5- by 6-foot area of floor and approximately 1.5 feet of underlying soil were removed around previous sample location 6225-0065 (3.4 mg/kg). Four discrete soil samples were collected on February 27, 2007 (B386RA05CS0819 through B386RA05CS0822) (Figure 3-1). PCBs were detected in samples B386RA05CS0819 and B386RA05CS0822 at a total concentration of 0.17 mg/kg (Table 3-1). This concentration is less than the cleanup goal of 1 mg/kg (Table 3-1). Removal Area 5 was backfilled with compacted materials on March 7, 2007, and covered with an asphalt layer on March 14, 2007.

3.6 Removal Area 6

On February 23, 2007, an approximately 5- by 5-foot area of floor and approximately 1.5 feet of underlying soil were removed around previous sample location 6225-0064 (1.6 mg/kg). Four discrete soil samples were collected on February 27, 2007 (B386RA06CS0823 through B386RA06CS0826) (Figure 3-1). PCBs were not detected above laboratory reporting limits in any of the verification soil samples (Table 3-1). Removal Area 6 was backfilled with compacted materials on March 7, 2007.

3.7 Removal Area 7

On February 26, 2007, an approximately 6- by 6-foot area of floor was removed around previous sample location 6225-0070 (4.5 mg/kg). Approximately 4 feet of underlying soil were removed, and four discrete soil samples were collected on February 27, 2007 (B386RA07CS27 through B386RA07CS0830) (Figure 3-1). PCBs were not detected above laboratory reporting limits in any of the verification soil samples (Table 3-1). Removal Area 7 was backfilled with compacted materials on March 7, 2007.

3.8 Removal Area 8

On February 20, 2007, an approximately 6- by 7-foot area of floor was removed around previous sample location 6225-0071 (3.2 mg/kg). Approximately 4 feet of underlying soil were removed, and four discrete soil samples were collected (B386RA08CS0831 through B386RA08CS0834) (Figure 3-1). PCBs were not detected above laboratory reporting limits in any of the verification soil samples (Table 3-1). Removal Area 8 was backfilled with compacted materials on March 7, 2007.

3.9 Removal Area 9

On February 26, 2007, an approximately 5- by 5-foot area of floor was removed around previous sample location 6225-0019 (2 mg/kg). Approximately 3 feet of underlying soil were removed, and four discrete soil samples were collected on February 27, 2007 (B386RA09CS0835 through B386RA09CS0838) (Figure 3-1). PCBs were not detected above laboratory reporting limits in any of the verification soil samples (Table 3-1). Removal Area 9 was backfilled with compacted materials on March 8, 2007.

3.10 Removal Area 10

On February 16, 2007, asphalt, concrete, and 3 feet of underlying soil were removed from an approximately 6- by 6-foot area around previous sample location 6225-0024 (1.6 mg/kg). Four discrete soil samples were collected on March 2, 2007 (B386RA10CS0839 through B386RA10CS0842) (Figure 3-1). PCBs were not detected above laboratory reporting limits in any of the verification soil samples (Table 3-1). Removal Area 10 was backfilled with compacted materials on March 8, 2007.

3.11 Removal Area 11

On February 23, 2007, concrete and 3 feet of underlying soil were removed from an approximately 5- by 5-foot area around previous sample location PC1734 (2.6 mg/kg). Four discrete soil samples were collected on February 28, 2007 (B386RA11CS0843 through B386RA11CS0846) (Figure 3-1). PCBs were not detected above laboratory reporting limits in any of the verification soil samples (Table 3-1). Removal Area 11 was backfilled with compacted materials on March 8, 2007.

3.12 Removal Area 12

On February 23, 2007, concrete and 3 feet of underlying soil were removed from an approximately 5- by 5-foot area adjacent to Removal Area 11 around previous sample location 6225-0013 (5 mg/kg). Four discrete soil samples were collected on February 28, 2007 (B386RA12CS0847 through B386RA12CS0850) (Figure 3-1). PCBs were not detected above laboratory reporting limits in any of the verification soil samples (Table 3-1). Removal Area 12 was backfilled with compacted materials on March 8, 2007.

3.13 Removal Area 13

On February 22, 2007, concrete and approximately 3 feet of underlying soil were removed from an approximately 7- by 6-foot area around previous sample location 6225-0256 (3.4 mg/kg). Four discrete soil samples were collected on February 28, 2007 (B386RA13CS0863 through B386RA13CS0866) (Figure 3-1). PCBs were not detected above laboratory reporting limits in any of the verification soil samples (Table 3-1). Removal Area 13 was backfilled with compacted materials on March 8, 2007.

3.14 Removal Area 14

On February 22, 2007, concrete and approximately 3 feet of underlying soil were removed from an approximately 7- by 6-foot area adjacent to Removal Area 13 around previous sample location 6225-0255 (11.2 mg/kg). Four discrete soil samples were collected on February 28, 2007 (B386RA14CS0867 through B386RA13CS0870) (Figure 3-1). PCBs were not detected above laboratory reporting limits in any of the verification soil samples (Table 3-1). Removal Area 14 was backfilled with compacted materials on March 8, 2007.

3.15 Removal Area 15

On February 15, 2007, asphalt, concrete, and approximately 4 feet of underlying soil were removed from an approximately 10- by 10-foot area around previous sample location 6225-0017 (10.1 mg/kg). Four discrete soil samples were collected on February 20, 2007 (B386RA15CS0851 through B386RA15CS0854) (Figure 3-1). PCBs were not detected above laboratory reporting limits in any of the verification soil samples (Table 3-1). Removal Area 15 was backfilled with compacted materials on March 6, 2007.

3.16 Removal Area 16

On February 15, 2007, asphalt, concrete, and approximately 3 feet of underlying soil were removed from an approximately 5-by 5-foot area around previous sample location 6225-0247 (6.9 mg/kg). Four discrete soil samples were collected on February 20, 2007 (B386RA16CS0855 through B386RA16CS0858) (Figure 3-1). PCBs were not detected above laboratory reporting limits in any of the verification soil samples (Table 3-1). Removal Area 16 was backfilled with compacted materials on March 6, 2007.

3.17 Removal Area 17

On February 22, 2007, an approximately 5- by 5-foot area of floor and 2 feet of underlying soil were removed around previous sample location 6225-0251 (1.5 mg/kg). Four discrete soil samples were collected on February 27, 2007 (B386RA17CS0859 through B386RA17CS0862) (Figure 3-1). PCBs were detected in sample B386RA17CS0860 at a total concentration of 0.12 mg/kg, which is less than the cleanup goal of 1 mg/kg (Table 3-1).

The soil removed during the 2007 cleanup actions at Removal Areas 1 through 17 was transported off site for Class I disposal at the Kettleman Hills waste disposal facility in Kettleman City, California. Appendix B contains copies of the waste manifests for the 2007 cleanup activities at PCB Site Building 386 AL#01.

TABLE 3-1
Verification Sample Results for PCB Site Building 386 AL#01
Site Characterization and Cleanup Action Summary Report for Polychlorinated Biphenyl Site Building 386 AL#01, Investigation Area C2, Lennar Mare Island, Vallejo, California

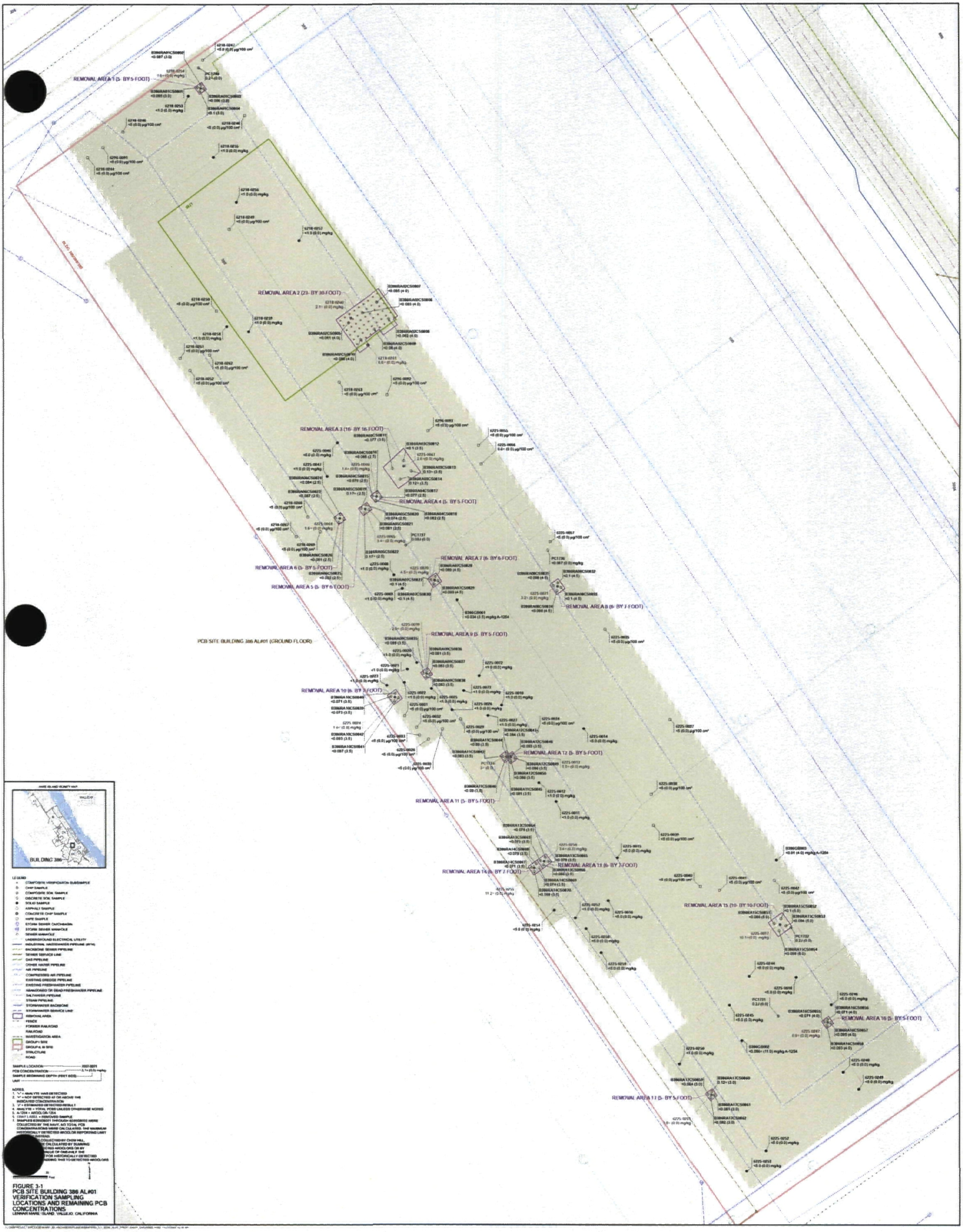
Sample Number	Sample Matrix	Sample Depth (feet bgs)	Sample Date	Total PCB Concentration[a] (mg/kg)	Comments
B386RA01CS0801	Soil	3	03/02/2007	<0.095	
B386RA01CS0802	Soil	3	03/02/2007	<0.087	
B386RA01CS0803	Soil	3	03/02/2007	<0.096	
B386RA01CS0804	Soil	3	03/02/2007	<0.1	
B386RA02CS0805	Soil	4	03/02/2007	<0.081	
B386RA02CS0806	Soil	4	03/02/2007	<0.083	
B386RA02CS0807	Soil	4	03/02/2007	<0.085	
B386RA02CS0808	Soil	4	03/02/2007	<0.082	
B386RA02CS0809	Soil	4	03/02/2007	<0.08	
B386RA02CS0810	Soil	4	03/02/2007	<0.086	
B386RA03CS0811	Soil	3.5	02/21/2007	<0.077	
B386RA03CS0812	Soil	3.5	02/21/2007	<0.1	
B386RA03CS0813	Soil	3.5	02/21/2007	0.13	Aroclor-1254 = 0.05 mg/kg Proxy Aroclor-1242 0.027 mg/kg Proxy Aroclor-1248 0.027 mg/kg Proxy Aroclor-1260 0.027 mg/kg
B386RA03CS0814	Soil	3.5	02/21/2007	0.12	Aroclor-1254 = 0.06 mg/kg Proxy Aroclor-1242 0.02 mg/kg Proxy Aroclor-1248 0.02 mg/kg Proxy Aroclor-1260 0.02 mg/kg
B386RA04CS0815	Soil	2.5	02/27/2007	<0.076	
B386RA04CS0816	Soil	2.5	02/27/2007	<0.085	
B386RA04CS0817	Soil	2.5	02/27/2007	<0.077	
B386RA04CS0818	Soil	2.5	02/27/2007	<0.082	
B386RA05CS0819	Soil	2.5	02/27/2007	0.17	Aroclor-1254 = 0.11 mg/kg Proxy Aroclor-1242 0.018 mg/kg Proxy Aroclor-1248 0.018 mg/kg Proxy Aroclor-1260 0.018 mg/kg
B386RA05CS0820	Soil	2.5	02/27/2007	<0.074	
B386RA05CS0821	Soil	2.5	02/27/2007	<0.081	
B386RA05CS0822	Soil	2.5	02/27/2007	0.17	Aroclor-1262[b] = 0.091 mg/kg Proxy Aroclor-1242 0.02 mg/kg Proxy Aroclor-1248 0.02 mg/kg Proxy Aroclor-1254 0.02 mg/kg Proxy Aroclor-1260 0.02 mg/kg
B386RA06CS0823	Soil	2.5	02/27/2007	<0.087	
B386RA06CS0824	Soil	2.5	02/27/2007	<0.084	
B386RA06CS0825	Soil	2.5	02/27/2007	<0.092	
B386RA06CS0826	Soil	2.5	02/27/2007	<0.081	
B386RA07CS0827	Soil	4.5	02/27/2007	<0.1	
B386RA07CS0828	Soil	4.5	02/27/2007	<0.089	
B386RA07CS0829	Soil	4.5	02/27/2007	<0.099	
B386RA07CS0830	Soil	4.5	02/27/2007	<0.1	
B386RA08CS0831	Soil	4.5	02/20/2007	<0.098	
B386RA08CS0832	Soil	4.5	02/20/2007	<0.1	
B386RA08CS0833	Soil	4.5	02/20/2007	<0.1	
B386RA08CS0834	Soil	4.5	02/20/2007	<0.096	

TABLE 3-1
Verification Sample Results for PCB Site Building 386 AL#01
Site Characterization and Cleanup Action Summary Report for Polychlorinated Biphenyl Site Building 386 AL#01, Investigation Area C2, Lennar Mare Island, Vallejo, California

Sample Number	Sample Matrix	Sample Depth (feet bgs)	Sample Date	Total PCB Concentration[a] (mg/kg)	Comments
B386RA09CS0835	Soil	3.5	02/27/2007	<0.098	
B386RA09CS0836	Soil	3.5	02/27/2007	<0.091	
B386RA09CS0837	Soil	3.5	02/27/2007	<0.083	
B386RA09CS0838	Soil	3.5	02/27/2007	<0.083	
B386RA10CS0839	Soil	3.5	02/27/2007	<0.073	
B386RA10CS0840	Soil	3.5	02/27/2007	<0.071	
B386RA10CS0841	Soil	3.5	02/27/2007	<0.087	
B386RA10CS0842	Soil	3.5	02/27/2007	<0.093	
B386RA11CS0843	Soil	3.5	02/28/2007	<0.083	
B386RA11CS0844	Soil	3.5	02/28/2007	<0.09	
B386RA11CS0845	Soil	3.5	02/28/2007	<0.091	
B386RA11CS0846	Soil	3.5	02/28/2007	<0.09	
B386RA12CS0847	Soil	3.5	02/28/2007	<0.084	
B386RA12CS0848	Soil	3.5	02/28/2007	<0.093	
B386RA12CS0849	Soil	3.5	02/28/2007	<0.096	
B386RA12CS0850	Soil	3.5	02/28/2007	<0.086	
B386RA13CS0863	Soil	3.5	02/28/2007	<0.073	
B386RA13CS0864	Soil	3.5	02/28/2007	<0.078	
B386RA13CS0865	Soil	3.5	02/28/2007	<0.079	
B386RA13CS0866	Soil	3.5	02/28/2007	<0.086	
B386RA14CS0867	Soil	3.5	02/28/2007	<0.071	
B386RA14CS0868	Soil	3.5	02/28/2007	<0.079	
B386RA14CS0869	Soil	3.5	02/28/2007	<0.074	
B386RA14CS0870	Soil	3.5	02/28/2007	<0.088	
B386RA15CS0851	Soil	5	02/20/2007	<0.086	
B386RA15CS0852	Soil	5	02/20/2007	<0.1	
B386RA15CS0853	Soil	5	02/20/2007	<0.094	
B386RA15CS0854	Soil	5	02/20/2007	<0.098	
B386RA16CS0855	Soil	4	02/20/2007	<0.071	
B386RA16CS0856	Soil	4	02/20/2007	<0.071	
B386RA16CS0857	Soil	4	02/20/2007	<0.095	
B386RA16CS0858	Soil	4	02/20/2007	<0.093	
B386RA17CS0859	Soil	3	02/27/2007	<0.064	
B386RA17CS0860	Soil	3	02/27/2007	0.12	Aroclor-1260 = 0.056 mg/kg Proxy Aroclor-1242 0.021 mg/kg Proxy Aroclor-1248 0.021 mg/kg Proxy Aroclor-1254 0.021 mg/kg
B386RA17CS0861	Soil	3	02/27/2007	<0.081	
B386RA17CS0862	Soil	3	02/27/2007	<0.082	

[a]Total PCBs were calculated by summing all of the detected Aroclors or by using proxy value of one-half the reporting limit for historically detected Aroclors and adding this to detected Aroclors. Proxy values are shown only when PCBs are detected.

[b]Aroclor-1262 was reported by the laboratory for this sample. Based on it's infrequency of detection at this assessment location, Aroclor-1262 has not been included in proxy calculations for Building 386 AL#01.


REMOVAL AREA 1 (5- BY 5 FOOT)
REMOVAL AREA 2 (23- BY 30 FOOT)
REMOVAL AREA 3 (16- BY 16 FOOT)
REMOVAL AREA 4 (5- BY 5 FOOT)
REMOVAL AREA 5 (5- BY 5 FOOT)
REMOVAL AREA 6 (5- BY 5 FOOT)
REMOVAL AREA 7 (5- BY 5 FOOT)
REMOVAL AREA 8 (5- BY 7 FOOT)
REMOVAL AREA 9 (5- BY 5 FOOT)
REMOVAL AREA 10 (5- BY 7 FOOT)
REMOVAL AREA 11 (5- BY 5 FOOT)
REMOVAL AREA 12 (5- BY 5 FOOT)
REMOVAL AREA 13 (5- BY 7 FOOT)
REMOVAL AREA 14 (5- BY 7 FOOT)
REMOVAL AREA 15 (10- BY 10 FOOT)
REMOVAL AREA 16 (5- BY 5 FOOT)
REMOVAL AREA 17 (5- BY 5 FOOT)
PCB SITE BUILDING 386 AL#01 (GROUND FLOOR)
BUILDING 386
LEGEND
NOTES
FIGURE 3-1
PCB SITE BUILDING 386 AL#01
VERIFICATION SAMPLING
LOCATIONS AND REMAINING PCB
CONCENTRATIONS
LENNAR MARE ISLAND, VALLEJO, CALIFORNIA

4.0 Polychlorinated Biphenyl Site Closure Process

Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), NFA is appropriate at a PCB site if no potential source and no PCB contamination are present (CH2M HILL 2003). Even if a potential source or PCB contamination is present in machinery or building materials, under CERCLA, NFA is appropriate at a site if there has been no release of PCBs to soil or groundwater and no visible pathway exists for migration of PCBs to soil or groundwater (CH2M HILL 2003). If there has been a known release to soil or groundwater, NFA is also appropriate if the detected PCB concentrations in soil and groundwater do not exceed the applicable preliminary remediation goal, or if results of a site-specific risk evaluation demonstrate that potential risks associated with exposure to residual PCBs are within the risk-management range generally used to determine whether cleanup is necessary.

No further sampling or cleanup is necessary at PCB Site Building 386 AL#01. Following the 2007 cleanup actions, the maximum remaining PCB concentrations are 0.2J mg/kg in concrete (sample PC1732), 0.2 mg/kg in asphalt (sample PC1740), 0.17 mg/kg in soil (samples B386RA05CS0819 and B386RA05CS0822), and 6.6 µg/100 cm^2 in wipe sample 6225-0056. These remaining PCB concentrations are below the TSCA cleanup goals of 1 mg/kg and 10 µg/100 cm^2.

Under TSCA, an NFA determination would be protective of human health and the environment at PCB Site Building 386 AL#01. The conditions for USEPA closure of PCB sites have been satisfied at this site.

5.0 Conclusions

No further sampling or cleanup actions are necessary at PCB Site Building 386 AL#01. In February and March 2007, CH2M HILL removed concrete, asphalt, and soil containing elevated concentrations of PCBs. Following the removal actions, verification samples were collected and analyzed to verify that elevated concentrations of PCBs had been removed from the site. The maximum remaining PCB concentrations are 0.2J mg/kg in concrete (sample PC1732), 0.2 mg/kg in asphalt (sample PC1740), and 0.17 mg/kg in soil (samples B386RA05CS0819 and B386RA05CS0822), and 6.6 µg/100 cm^2 in wipe sample 6225-0056. Therefore, PCBs do not remain at PCB Site Building 386 AL#01 at concentrations greater than the TSCA cleanup goals of 1 mg/kg and 10 µg/100 cm^2.

An NFA determination would be protective of human health and the environment at PCB Site Building 386 AL#01. Under TSCA, NFA is appropriate at PCB Site Building 386 AL#01 because of the following conclusions:

- The source of the PCBs at this site no longer exists.
- The remaining detectable total PCB concentrations are less than 1 mg/kg and 10 µg/100 cm^2.

The conditions for USEPA closure of PCB sites have been satisfied at this site. Therefore, it is requested that USEPA issue an NFA determination for PCB Site Building 386 AL#01.

6.0 References

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